



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/771,471	01/26/2001	Mark J. Kittock	1892-174 (81841.0044)	6212

22471 7590 11/30/2005

PATENT LEGAL DEPARTMENT/A-42-C  
BECKMAN COULTER, INC.  
4300 N. HARBOR BOULEVARD  
BOX 3100  
FULLERTON, CA 92834-3100

EXAMINER

CROSS, LATOYA I

ART UNIT	PAPER NUMBER
----------	--------------

1743

DATE MAILED: 11/30/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/771,471

Applicant(s)

KITTOCK ET AL.

Examiner

LaToya I. Cross

Art Unit

1743

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 12 September 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-46 is/are pending in the application.
- 4a) Of the above claim(s) 12-22 and 32-39 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-11, 23-31 and 40-46 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

### DETAILED ACTION

This Office Action is in response to Applicants' amendments filed on September 12, 2005. Claims 1-46 are pending. Claims 12-22 and 32-39 are withdrawn from consideration as being directed to non-elected subject matter.

#### *Claim Rejections - 35 USC § 103*

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

2. Claims 1, 23, 25, 26, 41 and 42 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 4,492,400 to Yuda (Yuda '400) in view of US Patent 6,652,015 to Carney et al.

Yuda '400 discloses a gripper for picking up objects and moving objects from one place to another. The gripper comprises body portion 10 (cylinder) having three gripping fingers 20. Inside the cylinder, there exists a piston 13 and a plunger B. The plunger B is connected to and movable with the piston 13, as recited in claim 1. Also, as shown in figure 3A, the plunger extends between the gripping fingers 20. With respect to method claims 23, 25, 26, 41 and 42, Yuda '400 discloses that gripper operates by the fingers picking up an object. The gripper moves the object to a new location. Fluid inlets in the cylinder forcefully move the cylinder up and down in both directions. The fingers operate to grip or release the object in response to a power stroke from the piston. See col. 2, lines 7-9 lines 20-23 and lines 38-43.

Yuda '00 differs from the instant invention in that the gripping fingers in Yuda do not hold an object friction.

Art Unit: 1743

Carney et al teach a gripper device comprising fingers with grasping ends. In one embodiment, Carney et al teach a gripper having a gripper actuator motor that provides the displacement that engages gripper device. Once the gripper actuator motor stops, Carney et al teach that it is the spring bias action that provides the gripping action of fingers (730). See col. 19, lines 5-9 and figure 12. Carney et al teach that the advantage of the spring like gripping fingers is that the fingers grip objects with an even, fairly constant amount of force. It would have been obvious to one of ordinary skill in the art to use spring-like gripping fingers, as opposed to fingers operated by mechanical means, in the gripper device of Yuda to make sure that the object is gripped evenly and with a constant amount of force, especially for gripping objects made of fragile materials.

3. Claims 1, 2, 6, 7, 23-29, 41, 42, 45 and 46 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 2,899,232 to Walter in view of US Patent 6,652,015 to Carney et al.

Walter discloses a bottle chuck system for picking up bottles, moving the bottles from one place to another and releasing the bottles after moving them (col. 1, lines 15-18). The system comprises a cylinder (15), having a piston (25), piston rod/plunger (24), and jaws/gripping members (48).

The system is carried on a movable support/positioning mechanism (11) and is also connected to a source of vacuum and pressurized air. The movable support is equivalent to Applicants' claimed positioning mechanism. With respect to the method claims, Walter discloses that the system operates by the support carrying the gripper system moves to the location of the bottle and descends upon the bottle, engaging the necks of bottles (col. 1, lines 43-50). When moved downwardly onto the bottles, spring (33) forces the jaws (48) to slide onto the neck of the bottle (col. 3, lines 1-8).

Art Unit: 1743

Walter discloses that when the bottles are moved to a new location, the body is subjected to pressure, which affects the release of the bottle by moving the jaws so that their lobes disengage from the neck of the bottle (col. 3, lines 25-50). The air source is considered to be similar to Applicants' claimed pneumatic means.

Walter differs from the instant invention in that the gripping fingers in Walter do not hold an object by friction.

Carney et al teach a gripper device comprising fingers with grasping ends. In one embodiment, Carney et al teach a gripper having a gripper actuator motor that provides the displacement that engages gripper device. Once the gripper actuator motor stops, Carney et al teach that it is the spring bias action that provides the gripping action of fingers (730). See col. 19, lines 5-9 and figure 12. Carney et al teach that the advantage of the spring like gripping fingers is that the fingers grip objects with an even, fairly constant amount of force. It would have been obvious to one of ordinary skill in the art to use spring-like gripping fingers, as opposed to fingers operated by mechanical means, in the gripper device of Walter to make sure that the objects gripped evenly and with a constant amount of force, especially for gripping objects made of fragile materials.

4. Claims 8, 9, 43 and 44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yuda '400 in view of US Patent 6,652,015 to Carney et al, as applied to claims 1, 23, 25 and 26 above, and further in view of US Patent 4,723,503 to Yuda (Yuda '503).

The disclosures of both Yuda '400 and Carney et al are described above. Neither reference teaches a means, in particular a magnet and sensor, for detecting whether the vessel has been picked up. Yuda '503 teaches a gripper assembly comprising a cylinder (10), piston (11) and gripping fingers (14). The assembly further comprises a magnetic material (A) carried by the piston (11) and a sensing switch (19)

Art Unit: 1743

indicate the position of the fingers and piston (col. 3, lines 5-9). It would have been obvious to one of ordinary skill in the art to incorporate a magnet and sensor into the gripper assembly of Yuda '400 to inform the user of the position of the gripper finger and piston, and to inform the user of whether the gripper fingers are in an open or closed position. With this information, the user can assure that the gripper moves into the correct position and that the object being gripped is picked up without any damage to the object or the gripper itself.

5. Claims 3-5 and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yuda '400 in view of US Patent 6,652,015 to Carney et al, or Walter in view of Carney et al, as applied above, and further in view of US Patent 3,554,594 to Thoma.

The disclosures of Yuda '400, Carney et al and Walter are described above. Neither reference teaches making the grippers out of plastic material nor chamfered bottom ends of the gripper fingers.

Thoma teaches a gripper assembly comprising a frame (2), piston (11) and gripping fingers (3). Thoma teaches that making the gripper out of resilient plastic material allows the device to be manufactured inexpensively and provides a material that will not damage the object being gripped (col. 2, lines 19-22, lines 37-39). The reference also teaches beveled edges at the lower portion of the gripper fingers (figure 2). It would have been obvious to one of ordinary skill in the art to make the gripper assemblies of Yuda '400 or Walter out of plastic material, because it is inexpensive and not rigid so as to damage the object being gripped. It would have been obvious to one of ordinary skill in the art to use beveled edges at lower portion of the gripping fingers in Yuda '400 or Walter to aid in gripping the object.

Art Unit: 1743

6. Claims 10, 11 and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Yuda '400 in view of US Patent 6,652,015 to Carney et al, or Walter in view of Carney et al, as applied above, and further in view of US Patent 6,520,315 to Sugarman et al.

The disclosures of Yuda '400, Carney et al and Walter are described above. Neither reference teaches a means for mixing the contents of the vessel being gripped (i.e. spinning means).

Sugarman et al teach a gripper assembly having fingers (29). Sugarman et al teach combining the grippers (13, 17) to a flywheel (15) which spins the vessel being gripped and allows the contents of the vessel to dry. It would have been obvious to one of ordinary skill in the art to incorporate a spinning means in the gripper assemblies of Yuda '400 or Walter to provide a mechanism by which liquid in the vessel may be dried before processing or testing.

It is noted that Sugarman et al do not teach using a spinning means for the same reason as Applicants, however, the prior may teach a different reason for using a particular feature. See Ex party Obiaya, 227 USPQ 58, 60 (Bd. Pat. App. & Inter. 1985).

### *Response to Arguments*

7. Applicant's arguments filed September 12, 2005 have been fully considered but they are not persuasive. With respect to the rejections over Yuda and Walter, Applicants argue that neither reference teaches the plunger moving "independently" of the gripping fingers. The Examiner disagrees. The teachings of Yuda and Walter are modified by the teachings of Carney. Carney teaches that it is advantageous to have the gripping fingers have a spring-like property, wherein the spring like property of the fingers is responsible for gripping the object. This combination of teachings satisfies the limitation of "move independently from each other" because in Carney teachings, the plunger is not needed for the gripping process. The plunger is used for opening the fingers and securing the fingers around the object.

Art Unit: 1743

The actual gripping is done by the spring-like properties of the gripping fingers. Thus, the plunger is not necessary for "gripping" and works independent of the fingers.

2. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to LaToya C. Younger whose telephone number is 571-272-1256. The examiner can normally be reached on Monday-Thursday 10:30 a.m. - 7:00 p.m. EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jill A. Warden can be reached on 571-272-1267. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
**MONIQUE T. COLE**  
**PRIMARY EXAMINER**